

CLAIMS

What is claimed is:

1. An indoor air quality module comprising:
an outer compartment attachable to a component; and
an inner compartment pivotally attached to the outer compartment and pivotal between a first position and a second position, the inner compartment having an inlet, an outlet, a monolith located between the inlet and the outlet, a photocatalytic coating applied on the monolith, and an ultraviolet light source to activate the photocatalytic coating.
2. The module as recited in claim 1 wherein the component is an air duct.
3. The module as recited in claim 1 wherein the inner compartment includes a first end and an opposing second end, and the first end of the inner compartment is pivotally attached to the outer compartment.
4. The module as recited in claim 3 wherein the opposing second end of the inner compartment is removably attached to the outer compartment by a fastener.
5. The module as recited in claim 4 wherein the fastener is a screw.
6. The module as recited in claim 1 wherein the inner compartment is substantially parallel to the outer compartment in the first position and the inner compartment is substantially perpendicular to the outer compartment in the second position.
7. The module as recited in claim 6 wherein said inner compartment is substantially horizontal in the first position and the inner compartment is substantially vertical in the second position.
8. The module as recited in claim 1 wherein the photocatalytic coating is titanium dioxide.

9. The module as recited in claim 1 wherein the monolith comprises a honeycomb.
10. The module as recited in claim 9 wherein the honeycomb comprises a plurality of hexagonal shaped passages coated with the photocatalytic coating.
11. The module as recited in claim 1 wherein the monolith defines a first monolith and a second monolith, and the ultraviolet light source is located between the first monolith and the second monolith.

12. An indoor air quality module comprising:
 - an outer compartment attachable to a component;
 - an inner compartment pivotally attached to the outer compartment and pivotal between a first position and a second position, the inner compartment having an inlet, an outlet, a first end pivotally attached to the outer compartment, an opposing second end, a monolith located between the inlet and the outlet, a titanium dioxide coating applied on the monolith, and an ultraviolet light source to activate the photocatalytic coating; and
 - a fastener to secure the opposing second end of the inner compartment to the outer compartment when the inner compartment is in the first position, removal of the fastener allowing the inner compartment to pivot relative to the outer compartment.
13. The module as recited in claim 1 wherein the first position is substantially horizontal and the second position is substantially vertical.

14. A method of purifying air comprising the steps of:
pivotally attaching an inner compartment to an outer compartment;
flowing air through a monolith having a photocatalytic coating;
illuminating the photocatalytic coating with an ultraviolet light source to activate the photocatalytic coating; and
pivoting the inner compartment between a first position and a second position.
15. The method as recited in claim 14 wherein the first position is substantially perpendicular to the second position.
16. The method as recited in claim 14 wherein the first position is substantially horizontal and the second position is substantially vertical.
17. The method as recited in claim 14 further comprising the step of attaching the outer compartment to a component.
18. The method as recited in claim 14 wherein the first position prevents access to the monolith and the ultraviolet light source and the second position allows access to the monolith and the ultraviolet light source.